

KEYSTONE

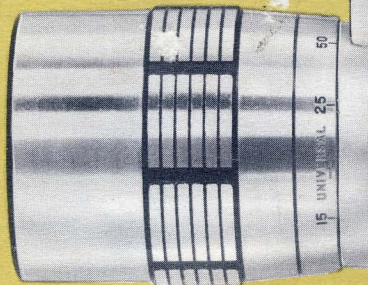
K-12

8 MILLIMETER
MOVIE CAMERA

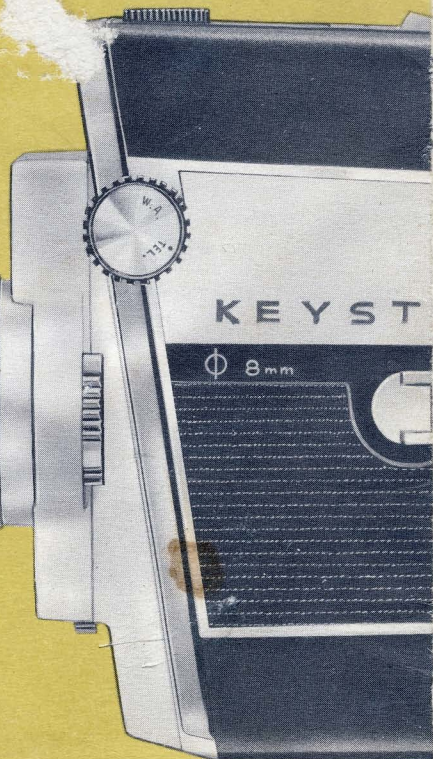
REFLEX AUTO ZOOM

WITH F1.8 FOCUSING MOUNT LENS

POWER CONTROL



INSTRUCTION MANUAL



YOUR KEYSTONE ELECTRIC EYE REFLEX AUTO ZOOM CAMERA MODEL K-12

To enjoy your camera and take movies at their finest, become familiar with the working parts and operating procedure of your REFLEX AUTO ZOOM camera. Hold the camera in a comfortable position as shown.

Your camera is equipped with an "adjust to your vision" eyepiece. By following these 4 instructions you can set the eyepiece for correct focus.

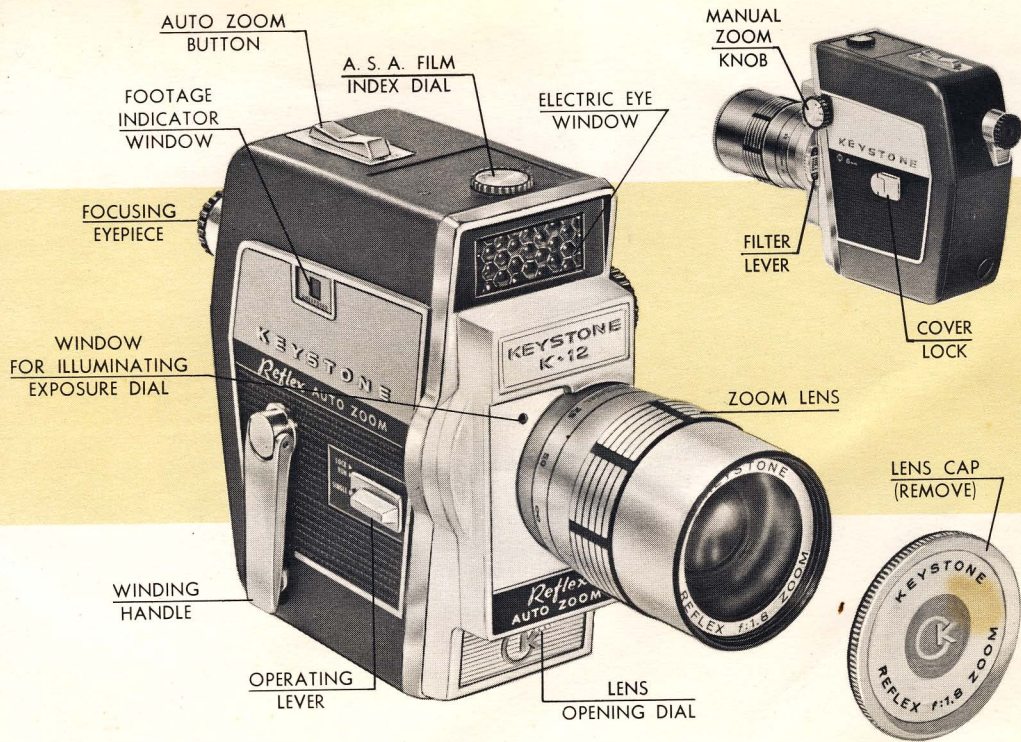
1. Unscrew lens cap.
2. Set the Zoom Lens with the infinity mark (∞) in line with the red triangle.
3. Turn the Manual Zoom Knob to TELEPHOTO position.
4. Select an object which is at least 50 feet away and while viewing through the eyepiece turn it clockwise or counter-clockwise until this object is in sharp focus to your eye.

Once these steps are completed your camera eyepiece should be properly focused for all scenes and Zoom Lens footage settings. The eyepiece does not have to be adjusted again unless by accident it should be turned, should this happen, follow the above instructions for correct focus.

Hold the camera in a comfortable position and while operating the camera as shown, practice zooming the lens by pressing down on the different positions of the reflex auto zoom until the desired effect is obtained.

The short length of practice film in your camera is supplied so that you may become acquainted with the proper threading. Exposure can not be made on this film.





KEEP THIS PAGE OPEN FOR REFERENCE

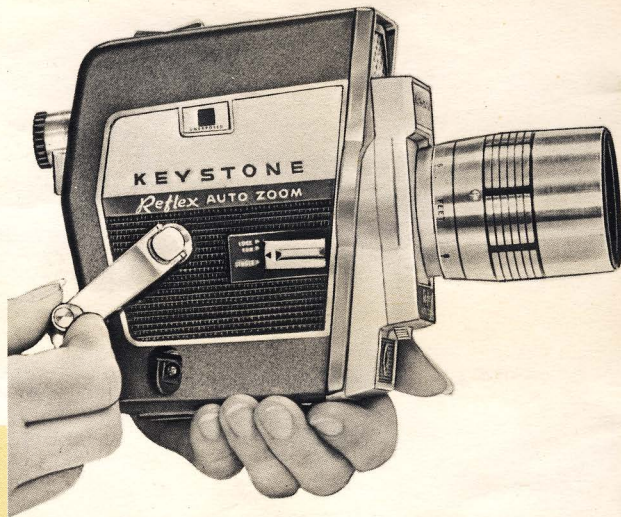
operating the camera . . .

1. Unscrew the lens cap.
2. Adjust focusing eyepiece. (Page 1)
3. Wind camera motor.
4. Set A.S.A. dial. (Page 9)
5. Set lens opening dial to "AUTO" or "MANUAL". (Pages 6 & 13)
6. Set filter lever to correct position ("OUT" for Outdoor Kodachrome). (Page 9)
7. Open cover and load camera. (Pages 4 & 5)
8. Adjust distance focusing ring. (Pages 15 thru 17)
9. Frame subject in viewfinder. (Page 6)
10. Hold camera steady.
DO NOT BLOCK ELECTRIC EYE WINDOW.
11. Press operating lever. (Page 11)
12. Wind camera after each scene.

CAUTION:

As with all movie cameras panning is not recommended, especially in the telephoto position. However when following a subject (as a child at play) your camera will automatically expose correctly even if you should pan or move camera during a scene. If panning is done hold camera steady and pan as slowly as possible.

winding the camera . . .

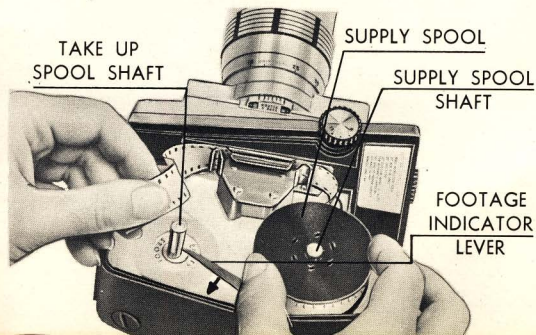


Before loading the film wind your camera motor. Lift the winding handle out of the recess in the case and flip it over into the winding position. Turn the winding handle clockwise until the camera motor is fully wound. After winding, turn the winding handle counter-clockwise and push it into the recess in the case.

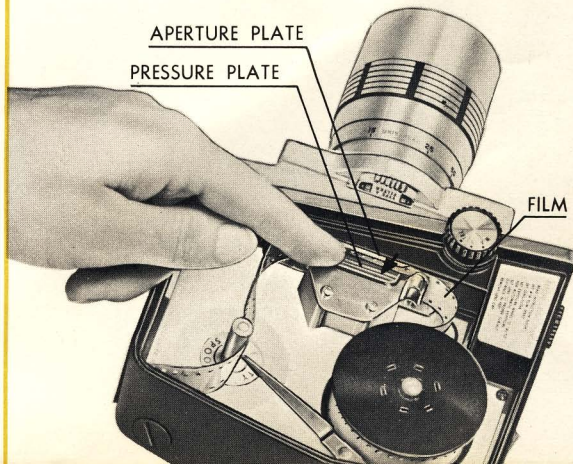
loading the camera . . .

IMPORTANT: Always load or unload the camera in subdued light. To open the camera cover turn the cover latch to the left and lift gently. Swing the footage indicator lever toward the rear of the camera (note arrow) and remove the take-up spool from the take-up spool shaft. Remove the purchased spool of film from the metal container. Save this container for returning the film to your dealer for processing. Hold the spool securely and unwind approximately 1 foot of film as a leader for threading purposes. Hold the film with both hands as shown and place the spool on the supply spool shaft.

The center hole with the four notches should be facing up and the film should follow arrow direction on plate.



Move the pressure plate back (note arrow) with your forefinger and insert the film between the pressure plate and the aperture plate. Release the pressure plate. Check to insure that the light side of the film is facing towards the front of the camera and that the upper edge of the film is under the lip. Press down on the operating lever and release after running about 3 inches of film through the camera in order to check the proper film position.

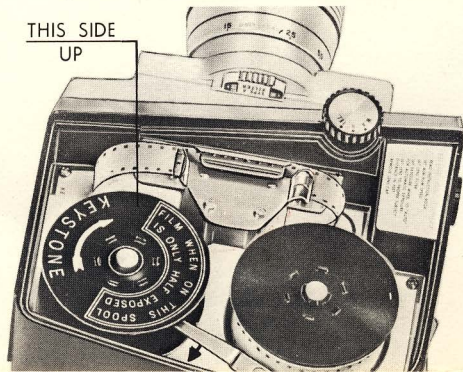


loading the camera (cont.) . . .

Hold the take-up spool so that the side that reads "Film When On This Spool Is Only Half Exposed" is facing up. Insert the end of the film into the spool hub slot. Wind about 3 inches of film around the spool in direction of arrow.



Swing the footage indicator lever (note arrow) toward the rear of the camera and place the take-up spool on the take-up spool shaft. Check to insure that the top surface of the spool is below the end of the shaft. Rotate the spool clockwise to take up slack in the film. Press down on the operating lever and release after running about 6 inches of film. If the film is threaded correctly, the take-up spool and supply spool will turn clockwise and the film will pass uniformly between the aperture plate and pressure plate. Replace the camera cover and lock it by turning the cover latch to the right. Run the camera until 25 appears in the center of the footage indicator window. The number appearing in this window indicates the number of feet of unexposed film remaining in the camera.



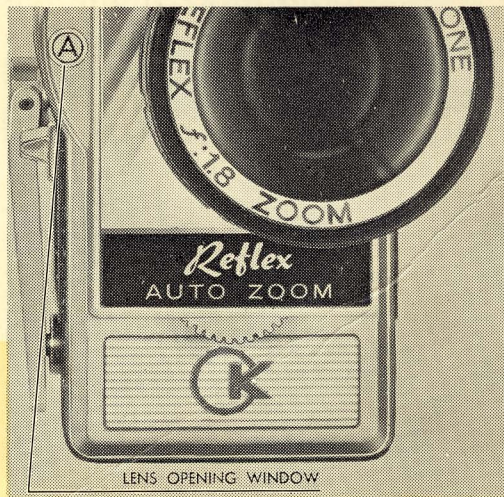
reflex viewfinder and zoom lens



The reflex zoom viewfinder gives you direct through the lens viewing which automatically gives the correct field of view since you are looking through the lens. Your camera will photograph exactly what you see in the viewfinder.

Located above the picture field are the lens opening numbers. These will change according to the brightness of your scene. If the warning bar touches any part of the pointer as shown above the light is insufficient for properly exposed pictures.

automatic operation . . .



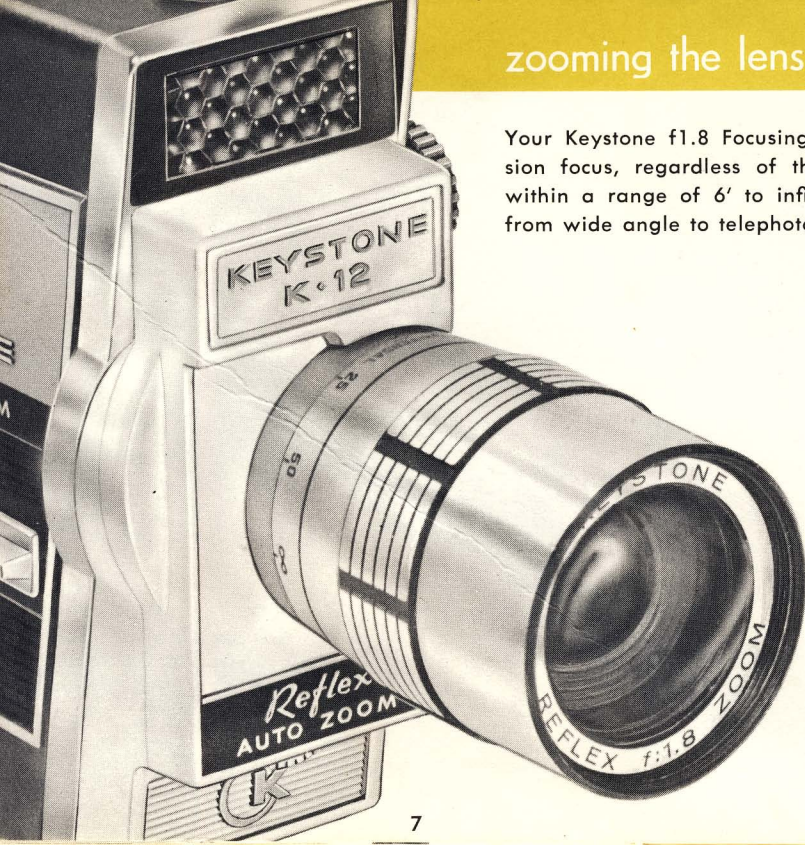
For fully automatic operation rotate the lens opening dial until the "A" is visible in the lens opening window. When adjusted correctly the dial will click into position. For best picture results, do not aim the camera at or toward the sun, keep the sun in back of you so that the subject is in direct sunlight. Aim the camera at the scene or subject to be photographed and shoot.

zooming the lens . . .

Your Keystone f1.8 Focusing Zoom Lens permits pinpoint, precision focus, regardless of the distance from camera to subject within a range of 6' to infinity . . . even in all lens positions, from wide angle to telephoto.

Because your Zoom lens can be set at any point within its 9mm to 27mm range, this gives the same versatility achieved by professional photographers and TV cameramen when "zooming in the subject" for dramatic close-up shots, or "zooming away" for wide-angle long shots.

Since the Keystone viewfinder gives direct through the lens viewing, you always see what the lens sees . . . therefore, you may select your scene in a second by merely framing the subject in the viewfinder exactly as you want it. Use the manual Zoom Knob for making this picture size adjustment.



auto zoom . . .

Camera must be wound and running when using the auto zoom feature. Hold the camera firmly in the right hand and press operating lever to start camera. (Photo page 1). As the camera is running press down on reflex auto zoom button to either the telephoto or wide angle position. Your lens will automatically and smoothly zoom under power in that direction.)

(Note: While auto zooming do not touch manual zoom lens knob.)

Use the zooming action sparingly, as it is good movie technique to use zoom as a transition from long shot to close-up. Once the close-up is achieved, continue shooting to develop your story interest. Your picture quality will be even better if you use a tripod. When shooting in telephoto position for extreme close-ups, use of the tripod insures the steadiest and most interesting pictures.

focusing the lens . . .

The universal focus is an additional convenience that eliminates changing the settings on the lens when shooting outdoors on a sunny day. Set the lens barrel with the red triangle opposite the word "Universal". On SUNNY DAYS all shots over 10 feet from camera will be in focus.

The Keystone lens has a substantial depth of focus which is illustrated in the various Depth of Field Charts provided on Pages 15 thru 17. When shooting Wide Angle or Telephoto shots or where the subject is not in bright sunlight consult the Depth of Field Charts to insure best pictures at any particular lens opening.

electric eye setting for film type . . .

Your "Electric Eye" is designed for use with 8mm color or black and white film.

Built into the camera is an A.S.A. Film Index Dial. This dial enables you to set the "Electric Eye" to agree with the speed of the film to be used in the camera.

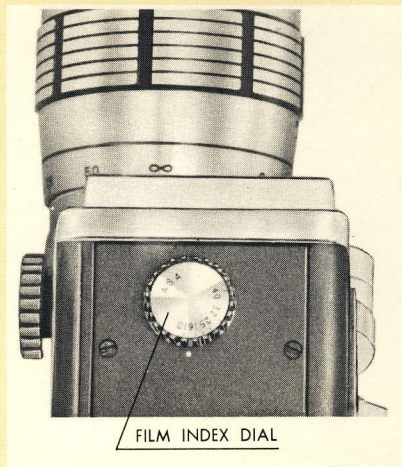
It is important to remember to set the dial to agree with the A.S.A. number of the film to be used in the camera. When using indoor film outdoors move the filter lever to "IN" position and set A.S.A. Film Index Dial to A.S.A. 10.

Example: If using A.S.A. 10 (outdoor color film) set the dial so that the marking above the number 10 lines up with the white dot on the top of the camera.

The A.S.A. Film Index Dial can be set between the numbers when using film speeds other than those on the dial.

The new Daylight Type Ansco Moviechrome Color Film (A.S.A. 20) has been provided for by the mark between 16 and 25 on the Film Index Dial.

Each film type is designated by a film index number set by the A.S.A. (American Standards Association). These indexes are shown in table below and in the pamphlet packed with your film.



FILM TYPE	A. S. A. FILM INDEX	
	DAYLIGHT	TUNGSTEN
KODACHROME DAYLIGHT TYPE	10	
KODACHROME TYPE A	10*	16
KODACHROME TYPE II	25	40
ANSCO MOVIECHROME DAYLIGHT TYPE	20	10**
ANSCO MOVIECHROME TYPE A	10***	16

*WITH DAYLIGHT CONVERSION FILTER
FOR TYPE A COLOR FILM.

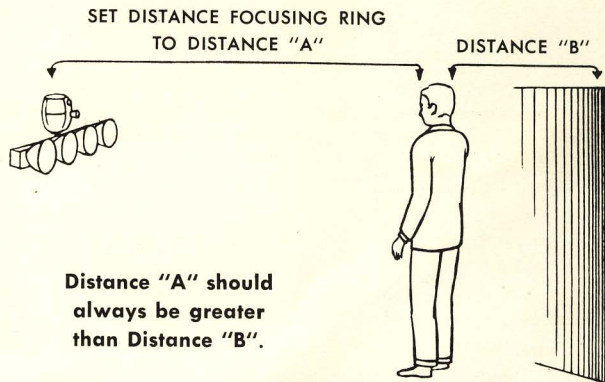
**WITH NUMBER 80B FILTER.

***WITH 85 (TYPE A) FILTER.

AUTOMATIC EXPOSURE WITH PHOTOFLOOD LAMPS

KEYSTONE MODEL K-12 WITH FOCUSING MOUNT f1.8 LENS

1. Use Type A Indoor Film, A.S.A. 16.
2. Move A.S.A. Film Index Dial to A.S.A. 16.
3. Move Filter Lever to "Out".
4. The subject should always be closer to the background than it is to the camera. This will insure an overall exposure as both subject and background will be lighted uniformly.
5. Set distance focusing ring at approximately distance "A".
6. **Using 300 Watt Lamps**
2 Lamps, Subject to camera
6' — 13'
4 Lamps, Subject to camera
8' — 19½'



7. **Using 375 Watt Lamps**
2 Lamps, Subject to camera
6' — 14'
4 Lamps, Subject to camera
8' — 22'

operating lever . . .

run . . .

The operating lever is shown in the run position. This is the normal operating position.

lock run . . .

The lock run position is particularly useful when the camera is mounted on a tripod and the operator wishes to get into the scene being taken.

single frame . . .

The operating lever is shown in the single frame position. Single frame operation is similar to that of a still picture in that one picture is exposed at a time. It is particularly useful for making animated titles or other special effects.

end of film . . .

When the figure "O" appears in the center of the footage indicator window your film is fully exposed. Operate the camera until "EXP" (exposed) appears in the center of the footage indicator window. Open the camera cover in subdued light and operate the camera until all the film is on the take-up spool.

second half . . .

Remove the upper (empty) spool. Swing the footage indicator lever toward the rear of the camera and remove the lower (full) spool in subdued light. Turn the full spool over (center hole with four notches will face up) and unroll about 1 foot of film as a leader for threading purposes. Place the full spool on the supply spool shaft and thread film as shown and described. Hold the empty spool so that the center hole with the 3 notches is facing up. Insert the film into the spool hub slot and wind about 3 inches of film around the spool. Swing the footage indicator lever back and place the empty spool on the take-up spool shaft.

Proceed as shown and described in loading the camera. (Page 4)

After the second half of the film has been exposed, remove the take-up (full) spool. Place the spool into the metal container in which it came. Place the can into the cardboard container and bring it or mail it to your dealer for processing.

Note: When the camera is not in use, avoid unnecessary tension on the motor spring by pressing the operating lever and letting the motor run down.

trial film . . .

It is recommended when using the camera for the first time that only one film be exposed and developed. After projection you will have an opportunity to study the exposure and other details of your first film, and make corrections for use on future films. If there are any questions we suggest you take your film to your dealer who will be glad to make recommendations for improvements.

advanced techniques . . .

Manual operation is recommended for the experienced photographer who wishes to obtain special photographic effects.

The camera is shipped to you in the automatic (A) position. You can control the lens openings manually by turning the lens opening dial clockwise from the automatic (A) setting toward the f11 or f16 positions.

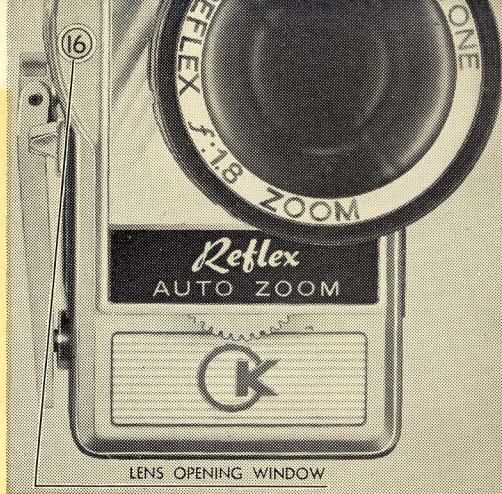
NOTE: When using ANY of the manual settings the lens opening as observed through the viewfinder will always indicate below f1.8.

Always return the lens opening dial to (A) automatic position when you have finished with manual operation.

TO FADE OUT . . . With the lens opening dial on the (A) position, note the f number when seen through the viewfinder. Manually rotate the lens opening dial until this same f number is shown through the lens opening window at front of camera. Run the camera while turning the lens opening dial toward the f16 position.

film plane marker:

The location of the film plane is identified by the Film Plane Marker on the Cover plate. This marker line is particularly useful when closeups are to be photographed and distances accurately measured.



some of the conditions under which it may be preferable to use manual settings are:

LIGHT BACKGROUND

DARK BACKGROUND

INDIRECT LIGHT



When an average or dark subject is to be photographed against a light background at a distance from the camera, an exposure increase of $\frac{1}{2}$ to 1 full "f" number is recommended for proper exposure balance. If automatic exposure indicates f11, manually set the exposure for f8.



When an average or light subject is against a dark background an exposure decrease of $\frac{1}{2}$ to 1 full "f" number is recommended. If automatic exposure indicated f5.6 you may then prefer to manually set the exposure for f8.



Another situation is when the light is not directly behind the camera but coming from one side or behind the subject. With the camera set on "AUTO" position move close to the subject and manually adjust to this same "f" number before shooting pictures in taking location.



DISTANCE FOCUSING RING SETTING

LENS OPENING		1.8	2.8	4.0	5.6	8.0	11.0	16.0
OBJECT IN FOCUS BETWEEN THESE DISTANCES								
∞	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	85.1'	54.7'	38.3'	27.4'	19.1'	13.9'	9.6'
50'	FAR	121.0'	213.7'	∞	∞	∞	∞	∞
	NEAR	31.5'	27.0'	23.0'	19.1'	15.4'	12.3'	9.2'
25'	FAR	35.4'	45.4'	63.5'	136.1'	∞	∞	∞
	NEAR	19.3'	17.2'	15.5'	13.5'	11.3'	9.4'	7.4'
18' RED UNIVERSAL FOCUS	FAR	23.7'	28.0'	35.2'	64.0'	∞	∞	∞
	NEAR	14.8'	13.6'	12.4'	10.9'	9.7'	8.1'	6.5'
15'	FAR	18.2'	20.2'	23.8'	30.7'	54.4'	∞	∞
	NEAR	12.8'	11.9'	11.0'	9.7'	8.6'	7.5'	6.1'
10'	FAR	11.3'	12.1'	13.3'	15.3'	19.7'	30.1'	∞
	NEAR	9.0'	8.5'	8.0'	7.5'	6.7'	6.0'	5.0'
8'	FAR	8.8'	9.3'	10.1'	11.2'	13.4'	17.9'	39.7'
	NEAR	7.3'	7.0'	6.6'	6.2'	5.7'	5.2'	4.4'
6'	FAR	6.4'	6.8'	7.0'	7.5'	8.6'	10.1'	14.8'
	NEAR	5.6'	5.4'	5.2'	4.9'	4.6'	4.2'	4.0'

EXAMPLE TELEPHOTO POSITION: With distance focusing ring set at 10' and lens opening at F2.8 position, subject will be in focus from 8.5 feet to 12.1 feet.



DISTANCE FOCUSING RING SETTING

LENS OPENING		1.8	2.8	4.0	5.6	8.0	11.0	16.0
OBJECT IN FOCUS BETWEEN THESE DISTANCES								
∞	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	24.1'	15.5'	10.8'	7.7'	5.4'	4.0'	2.8'
50'	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	16.3'	12.2'	9.3'	7.1'	5.2'	4.0'	2.8'
25'	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	12.3'	9.7'	7.8'	6.1'	4.6'	3.5'	2.6'
18' RED UNIVERSAL FOCUS	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	10.2'	8.3'	6.9'	5.6'	4.3'	3.4'	2.5'
15'	FAR	40.0'	169.3'	∞	∞	∞	∞	∞
	NEAR	9.3'	7.7'	6.4'	5.3'	4.1'	3.3'	2.4'
10'	FAR	17.0'	26.6'	81.9'	∞	∞	∞	∞
	NEAR	7.1'	6.2'	5.4'	4.5'	3.7'	2.9'	2.2'
8'	FAR	12.0'	16.1'	27.7'	∞	∞	∞	∞
	NEAR	6.0'	5.3'	4.7'	4.1'	3.3'	2.7'	2.1'
6'	FAR	8.0'	9.7'	13.0'	22.9'	∞	∞	∞
	NEAR	4.8'	4.3'	3.9'	3.4'	2.9'	2.5'	1.8'

EXAMPLE NORMAL POSITION: With distance focusing ring set at 25' and lens opening at the F11.0 position, subject will be in focus from 3.5 feet to infinity (∞).

DEPTH OF FIELD CHART

WIDE ANGLE

DISTANCE FOCUSING RING SETTING

LENS OPENING		1.8	2.8	4.0	5.6	8.0	11.0	16.0
OBJECT IN FOCUS BETWEEN THESE DISTANCES								
∞	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	11.4'	7.3'	5.1'	3.6'	2.5'	1.9'	1.4'
50'	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	9.2'	6.4'	4.8'	3.5'	2.5'	1.9'	1.3'
25'	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	7.8'	5.7'	4.4'	3.2'	2.3'	1.8'	1.3'
18' <small>RED UNIVERSAL FOCUS</small>	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	7.0'	5.1'	4.0'	3.1'	2.2'	1.7'	1.2'
15'	FAR	∞	∞	∞	∞	∞	∞	∞
	NEAR	6.5'	4.9'	3.8'	3.0'	2.2'	1.7'	1.2'
10'	FAR	81.4'	∞	∞	∞	∞	∞	∞
	NEAR	5.3'	4.2'	3.4'	2.7'	2.1'	1.6'	1.1'
8'	FAR	26.8'	∞	∞	∞	∞	∞	∞
	NEAR	4.8'	4.0'	3.2'	2.6'	2.0'	1.6'	1.1'
6'	FAR	12.6'	29.6'	∞	∞	∞	∞	∞
	NEAR	4.0'	3.3'	2.8'	2.4'	1.8'	1.4'	1.0'



EXAMPLE WIDE ANGLE: With distance focusing ring set at 8' and lens opening at F4.0 position, subject will be in focus from 3.2 feet to infinity (∞).

care of the camera . . .

When not in use keep your camera in a Keystone carrying case designed to protect your camera from dust and dirt.

CAMERA LENS — Clean outside surfaces with a small, soft-haired brush or with a clean, soft, lintless cloth wrapped around a pencil.

ELECTRIC EYE WINDOW — Clean outer surface as described above.

APERTURE AND PRESSURE PLATES — Clean any hardened film emulsion on the aperture and pressure plates with a small piece of lintless cloth (moistened slightly with alcohol or cleaning fluid) wrapped around a match stick or toothpick.

SEND IN YOUR GUARANTEE REGISTRATION CARD

Your Keystone Reflex Auto Zoom Camera carries a one year guarantee, subject to the limitations noted on the registration card enclosed with the camera. The guarantee does not become effective unless your registration card is filled out completely and mailed to the Keystone factory within 30 days from date of purchase.

**FILL IT OUT AND MAIL IT
TODAY. YOUR CAMERA'S
SERIAL NUMBER IS ON THE
INSTRUCTION NAMEPLATE
INSIDE THE CAMERA.**

PISTOL GRIP (ACCESSORY)

The Keystone Pistol Grip is an added convenience designed to simplify operating your camera. Not only does it give support while taking movies, it also minimizes shaking. This is particularly important while using telephoto position.

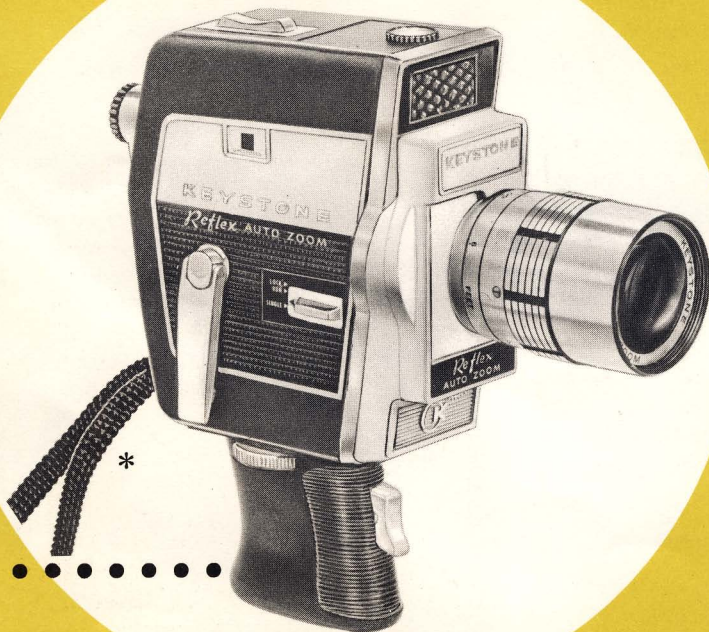
When attached to the camera you need only press the trigger to take movies.

(Note: Operating lever of camera must be in normal position.) To attach the Pistol Grip to the bottom of the camera line-up the guide pin on Pistol Grip with the positioning hole on the bottom of camera.

Hold the Pistol Grip in place while turning the hand screw until it bottoms in the threaded hole. When this has been done, your Pistol Grip will be locked in place and ready for use.

To mount camera with Pistol Grip on light bar, use threaded bushing on bottom of Pistol Grip.

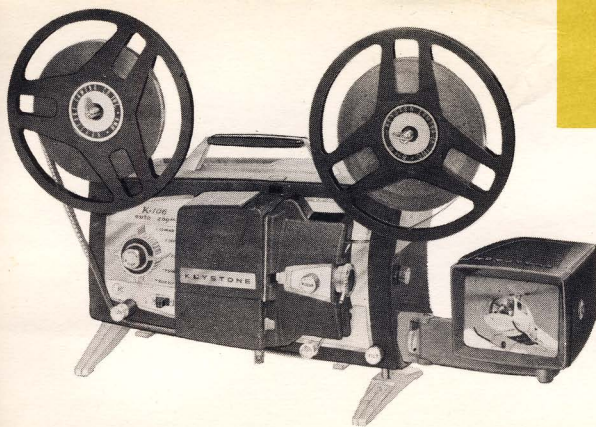
You may remove the Pistol Grip at any time by turning the hand screw to unthread.



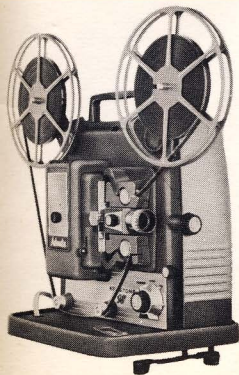
*May be purchased as an extra.

CS-1 Wrist Strap

3 NEW AUTOMATIC MOVIE PROJECTORS BY KEYSTONE



K-106Z PROJECTOR — This is a new advance design automatic loading projector with an attachable action editor-viewer. It features, in addition to automatic loading, an $f/1.2$ zoom lens, single knob control for forward, reverse, still and rewind, rheostat speed control, room lite outlet, 400 ft. reel capacity, swing-out film gate, Quik Splice Kit, permanently lubricated, tilting, framer, reel storage at bottom of projector.



K-98 AUTO THREAD PROJECTOR — Threads itself in 6 seconds. $f/1.6$ wide-angle Magnascope Lens projects brilliant full-screen image at only 13 ft. Cool-running low wattage Tru-flector Lamp is brighter than 500 watts. One knob controls forward, reverse, still, stop and fast rewind. Die cast aluminum body and case. Fully geared reel arms. Room light switch, rheostat speed control, 400' reels.



K-112Z DELUXE AUTOMATIC LOADING REMOTE CONTROL PROJECTOR — Everything needed to show home movies in one unit. This auto-load projector has an $f/1.2$ zoom lens; illuminated push button control panel with forward, reverse, still, rewind; rheostat speed control; room lite outlet; 400 ft. reel capacity; built-in-splicer; built-in editor-viewer; swing out film gate; film reel storage; tilting; permanently lubricated; framer; remote control unit has off, forward, still, and reverse.

KEYSTONE

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